

AI-POWERED XML EDITING

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About me

#syncrosoft #xml #oxygenxml #opensource #technology #tango

Oxygen Tools

Editing & Developing



XML Editor



XML Developer



XML Author



XML Web Author



Content Fusion

Collaboration & Review

Publishing



Publishing Engine



PDF Chemistry



XML WebHelp



Feedback



Oxygen Scripting

Automation

Editing & Developing



Oxygen XML Editor

The Premier All-In-One XML Editing Suite



Oxygen XML Author

Single-Source XML Authoring and Multi-Channel Publishing



Oxygen XML Developer

The Required Tools for Designing XML Schemas and Transformation Pipelines



Oxygen JSON Editor

The Perfect Tool to Simplify Your JSON Editing Experience

Publishing



Oxygen Publishing Engine

The Complete DITA Publishing Solution for WebHelp and PDF Output



Oxygen PDF Chemistry

Chemistry Converts HTML and XML to PDF Using CSS



Oxygen XML WebHelp

Publish DITA and DocBook Content to WebHelp Output



Oxygen Styles Basket

Customize the Look and Feel of Your PDF and WebHelp Output

Collaboration & Review



Oxygen XML Web Author

Engage Your Whole Organization In Content Creation



Oxygen Content Fusion

The Web-based Collaboration Platform to Craft Tomorrow's Content



Oxygen Feedback

Modern Commenting Platform

Cloud Enterprise

AI Support



Oxygen AI Positron

Enhance Your Productivity with the Power of AI

Automation and Extensibility



Oxygen Scripting

Automate and Run Oxygen Utilities from the Command-Line Interface



Oxygen SDK

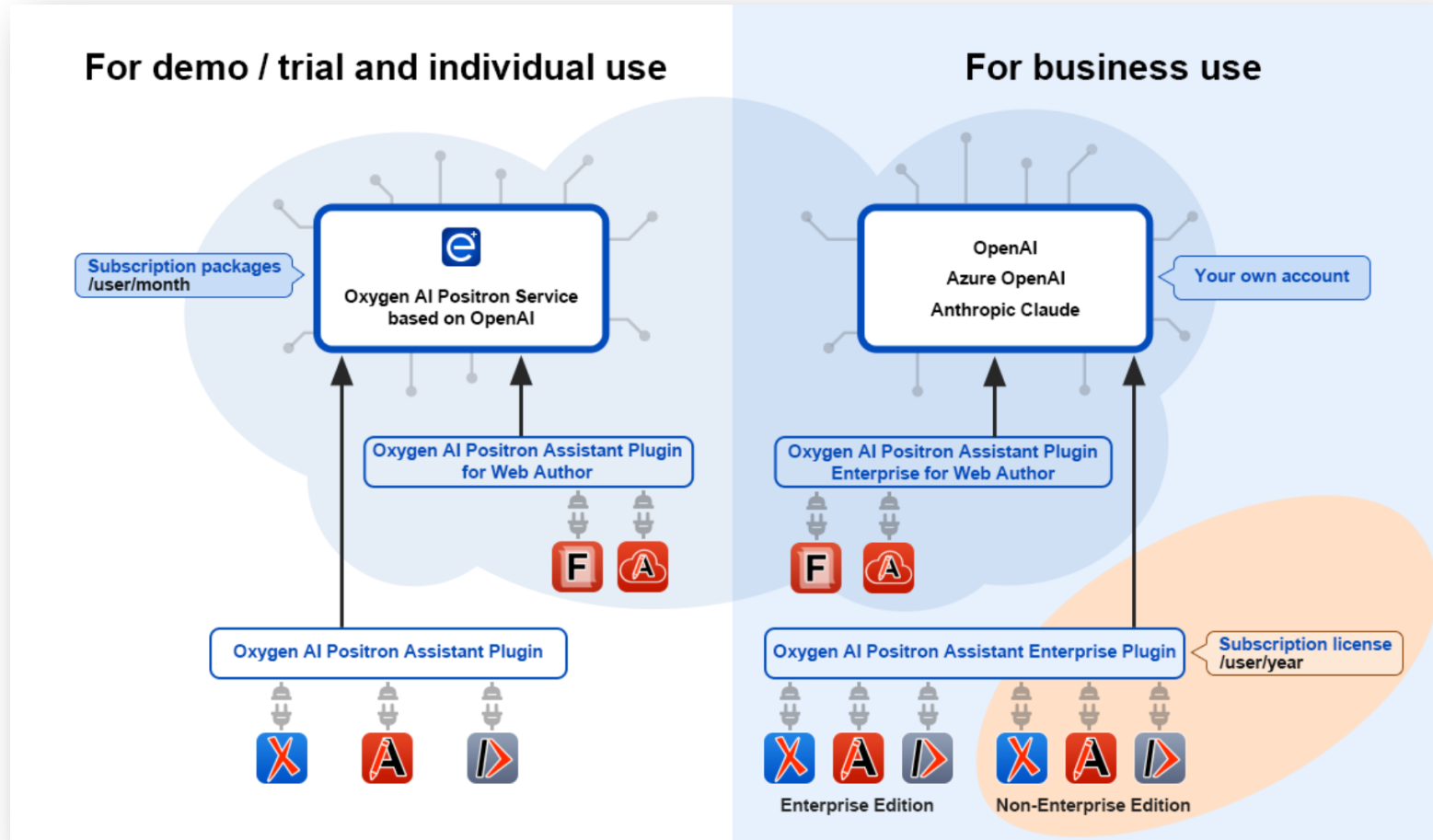
Specifically designed for application developers and integrators

AI-Powered XML Editing

Is AI ready to be used?

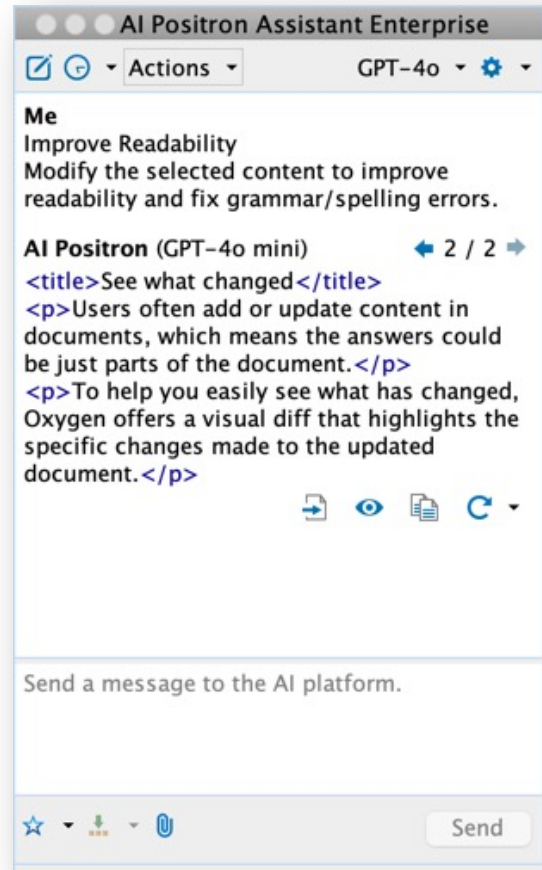
Yes, but with care :)

Oxygen AI Positron Assistant add-ons

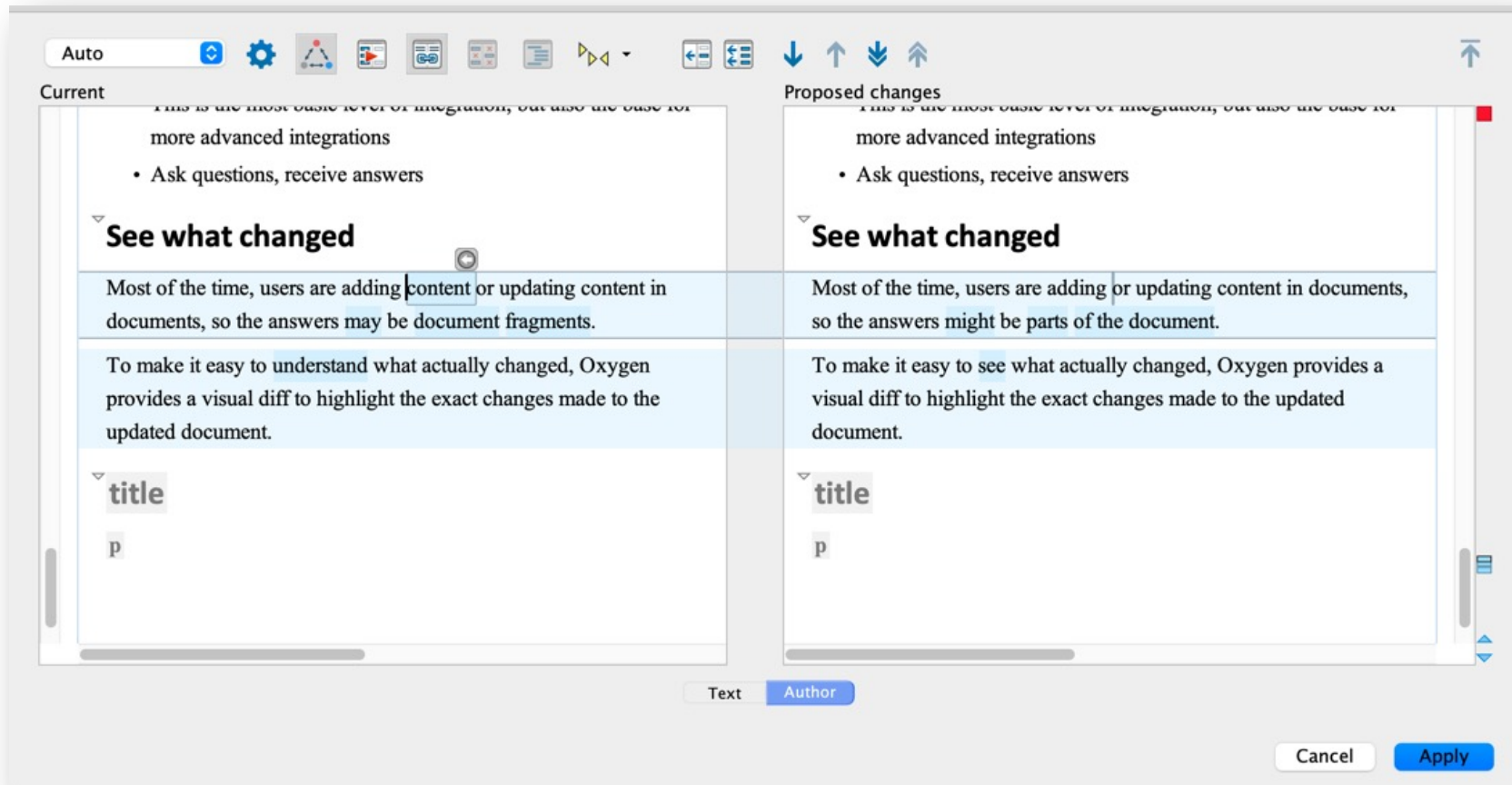


Basic interactions with Chat

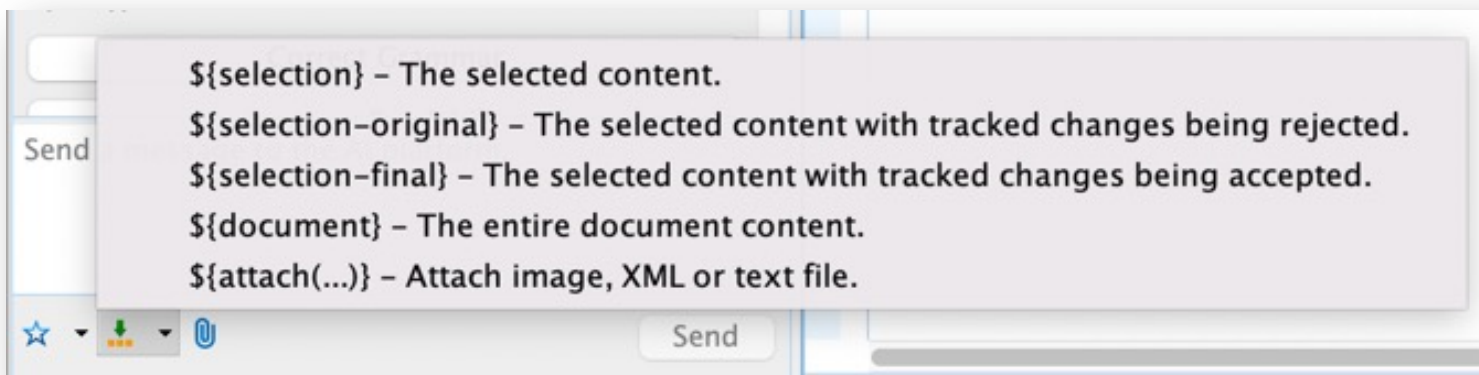
Multiple variants with editable chat history



Review what was changed and apply the changes



Prompt variables and functions



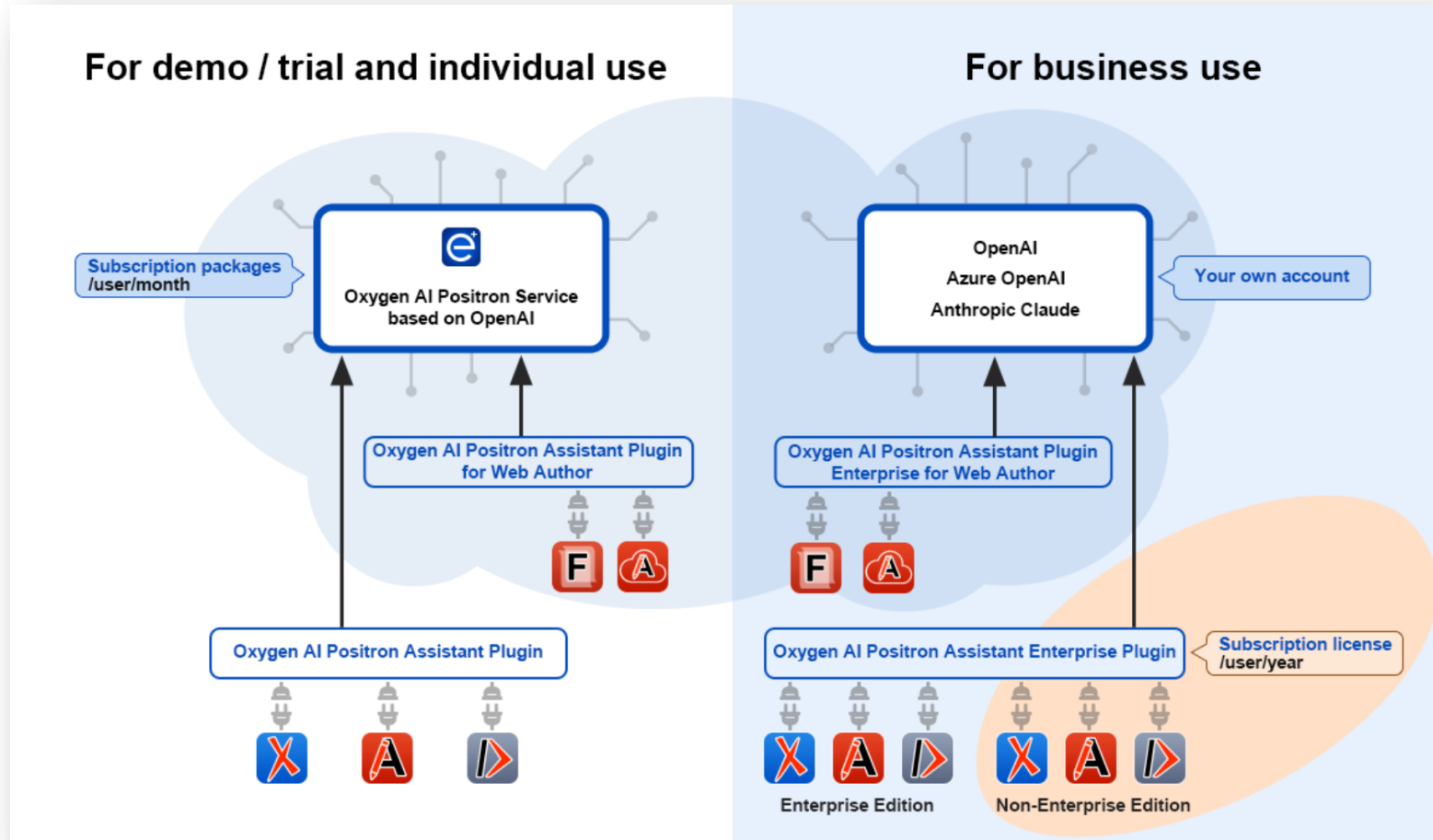
Enable the AI to find additional information

- RAG - Retrieval-Augmented Generation
- AI callback functions, such as:
 - `get_related_content_from_project`
 - `get_related_resources_overview_from_project`
 - `get_current_document_plain_text_content`
 - `get_current_document_marked_up_content`
 - `get_text_around_caret`

Vision support

- Combining text and vision is essential for XML documents and in particular for structured technical documentation
- Enables better results for some actions and new actions that would be impossible otherwise
- Integration of vision using a prompt function that can be placed within a prompt, so you can just write naturally the prompt and refer to an image.

Describe this image: $\{\text{attach}(\dots/\text{addons.png})\}$



Plain Text

The image is a diagram that compares the use of the "Oxygen AI Positron Assistant" for demo/trial and individual use versus business use. It highlights different subscription models, services, and plugins available based on the type of use.

Left Side: For Demo/Trial and Individual Use

- **Service**: Oxygen AI Positron Service based on OpenAI
- **Subscription Packages**: Charged per user per month
- **Plugins**:
 - Oxygen AI Positron Assistant Plugin for Web Author
 - Oxygen AI Positron Assistant Plugin
 - **Applications**:
 - Represented by icons, likely indicating different functionalities or integrations (X, A, F, D).

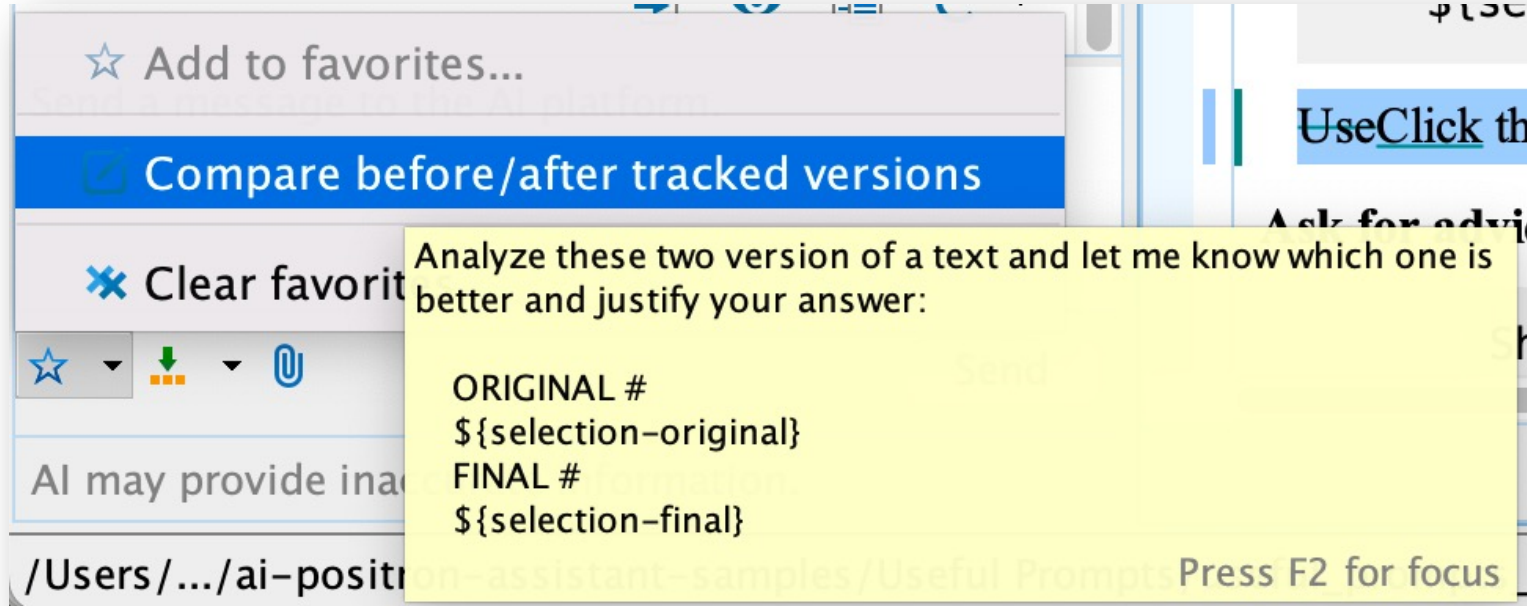
Right Side: For Business Use

- **Service**: Options including OpenAI, Azure OpenAI, and Anthropic Claude
- **Subscription License**: Charged per user per year
- **Plugins**:
 - Oxygen AI Positron Assistant Plugin Enterprise for Web Author
 - Oxygen AI Positron Assistant Enterprise Plugin
 - **Applications**:
 - Represented by similar icons as the left side (X, A, F, D), indicating Enterprise and Non-Enterprise Editions.

Additional Notes:

- The business use section mentions "Your own account," suggesting that users can integrate their own accounts with these services.
- The diagram uses connecting lines and arrows to show the flow from subscription packages and services to the plugins and applications.

Quick AI prompts reuse with favorite prompts



AI Actions

- Initiate a chat but offers much more than a favorite prompt.
- Specify initial prompt, AI model, context information, result type, settings
- Refine results by continuing the chat
- Defined by a configuration file (specific editing support provided to offer available keys and possible values)
- Many predefined AI Actions covering the common use cases and the actions we found valuable.

Predefined AI Actions

- Accessibility
- Content generation
- Rewrite
- Review - AI integration via comments/annotations
- Overview
- Translation
- Marketing
- Development

Accessibility - generate alternate text for image

Draft summary

The summary contains the information needed as a starting point for the draft generation.

We have a new action "Format and Indent..." in the contextual menu of the project explorer.

Use related content from project

Image

An image to be analyzed by the AI.

format_and_indent_files.png

Format and Indent Files

Scope

- All opened files
- Current file directory
- Project
- Selected project resources
- Spelled path: 2022/project-oxygen-xml-editor/topics

Options

File filter: *

Recurse subdirectories Include hidden files

Make backup files with extension: bak

OK Cancel

+ -

Similar topic

A topic that serves as an inspiration for the AI when generating the draft.

similar.dita

Draft configuration interface with options for summary, image analysis, and similar topic selection.

[Plain Text](#)

Content generation actions

- Generate documentation draft
- New topic
- Update content based on updated images
- Continue writing
- Generate short description
- Suggest index terms
- Add structured content

Generate documentation draft

Draft summary

The summary contains the information needed as a starting point for the draft generation.

We have a new action "Format and Indent..." in the contextual menu of the project explorer.

Use related content from project

Image

An image to be analyzed by the AI.

format_and_indent_files.png

Format and Indent Files

Scope

- All opened files
- Current file directory
- Project
- Selected project resources
- Specified paths: 2023/project-oxygen-xml-editor/topics

Options

File filter: *

Recurse subdirectories Include hidden files

Make backup files with extension: bak

OK Cancel

+ -

Similar topic

A topic that serves as an inspiration for the AI when generating the draft.

similar.dita

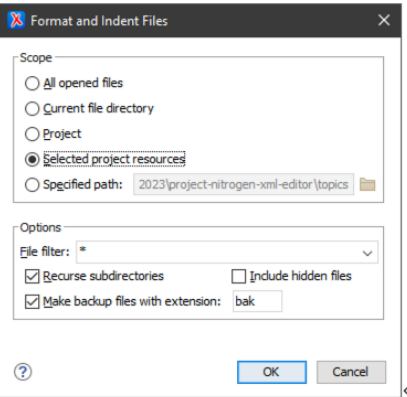
Documentation draft result

Format and Indent Files

The **Format and Indent...** action is available in the contextual menu of the **Project Explorer**. This action allows you to format and indent multiple files within a specified scope.

When you select the **Format and Indent...** action, the **Format and Indent Files** dialog box appears, providing various options to define the scope and other settings for the operation.

Format and Indent Files Dialog Box



The following scopes are available in the dialog box:

- **All opened files** - Formats and indents all currently opened files.
- **Current file directory** - Formats and indents all files in the directory of the currently edited file.
- **Project** - Formats and indents all files in the current project.
- **Selected project resources** - Formats and indents only the selected resources in the project.
- **Specified path** - Formats and indents all files in a user-specified directory path.

The **Options** section includes the following settings:

- **File filter** - Allows you to specify a file filter to include only certain types of files.
- **Recurse subdirectories** - If selected, the operation will include files in subdirectories.
- **Include hidden files** - If selected, the operation will include hidden files.
- **Make backup files with extension** - If selected, backup files will be created with the specified extension before formatting and indenting.

Text Grid **Author**

New topic

Create an "Installation" DITA topic with 2 sections: "System requirements" and "Installation steps".
Provide some minimum and recommended values for the system requirements.
Use a 3-column table for the system resources, the columns being called Resource, Minimum and Recommended.

Installation

System Requirements

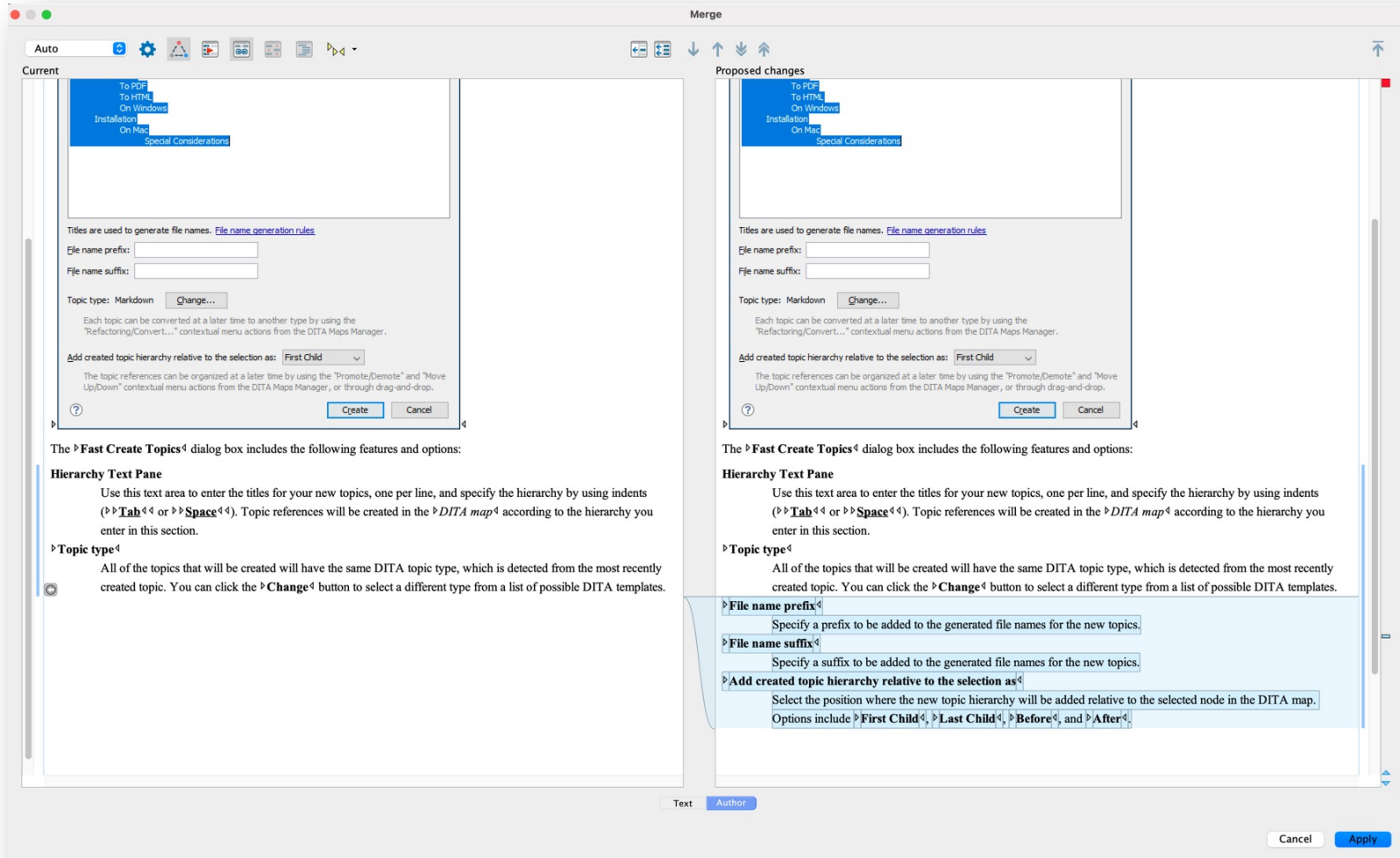
colspecs...

Resource	Minimum	Recommended
Processor	1 GHz	2 GHz or faster
RAM	2 GB	4 GB or more
Storage	10 GB	20 GB or more
Operating System	Windows 7	Windows 10

Installation Steps

1. Download the installer from the official website.
2. Run the installer and follow the on-screen instructions.
3. Accept the license agreement and select the installation directory.
4. Click "Install" to begin the installation process.
5. Once the installation is complete, click "Finish" to exit the installer.
6. Restart your computer if prompted.

Update content based on updated images



The **Fast Create Topics** dialog box includes the following features and options:

Hierarchy Text Pane

Use this text area to enter the titles for your new topics, one per line, and specify the hierarchy by using indents (▶▶**Tab**◀◀ or ▶▶**Space**◀◀). Topic references will be created in the **DITA map** according to the hierarchy you enter in this section.

▶**Topic type**

All of the topics that will be created will have the same DITA topic type, which is detected from the most recently created topic. You can click the **Change** button to select a different type from a list of possible DITA templates.

▶**File name prefix**

Specify a prefix to be added to the generated file names for the new topics.

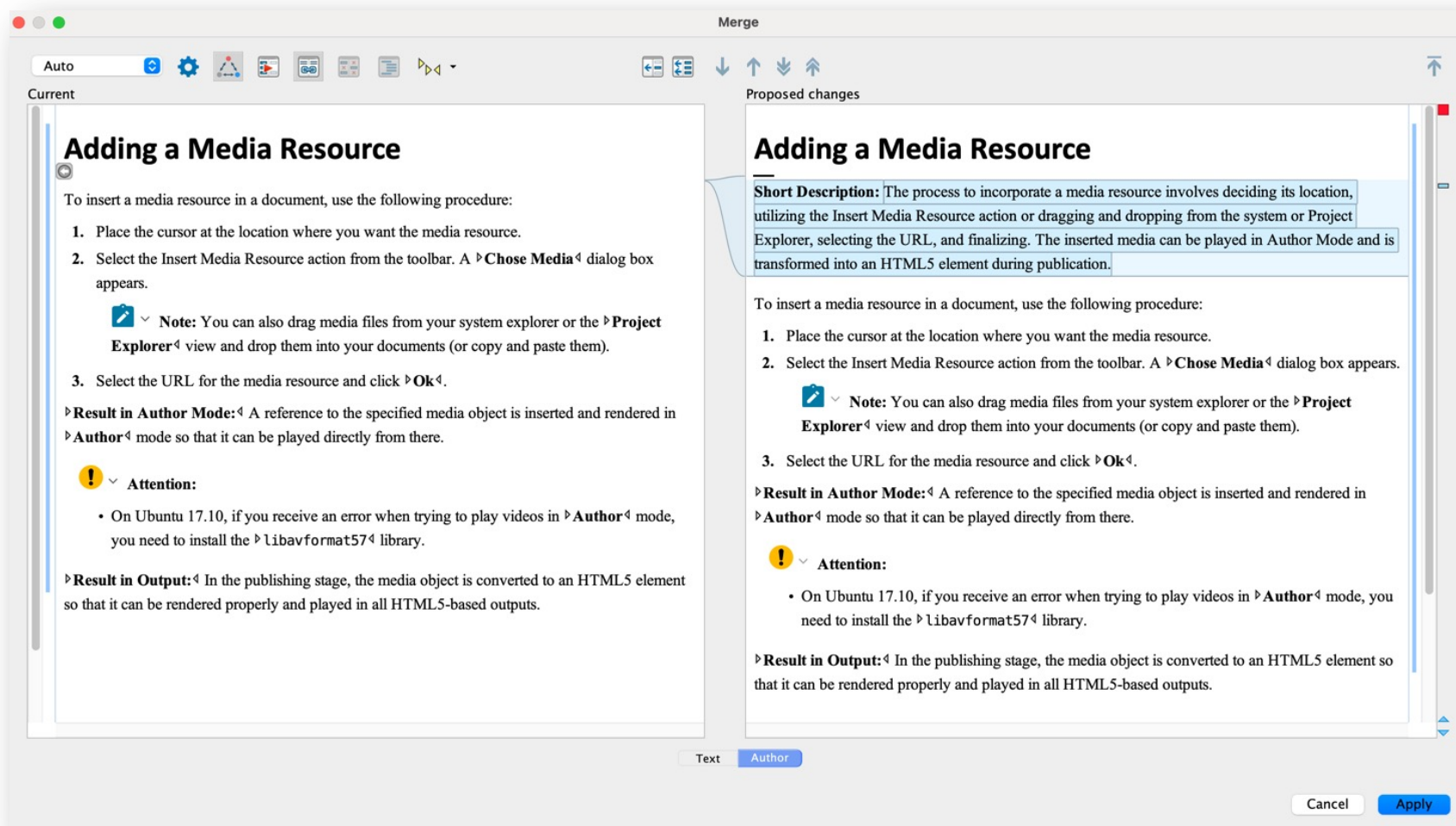
▶**File name suffix**

Specify a suffix to be added to the generated file names for the new topics.

▶**Add created topic hierarchy relative to the selection as**

Select the position where the new topic hierarchy will be added relative to the selected node in the DITA map. Options include ▶**First Child**◀, ▶**Last Child**◀, ▶**Before**◀, and ▶**After**◀.

Generate short descriptions



Generate index terms

The screenshot shows the Oxygen XML Editor interface with two side-by-side views: 'Current' and 'Proposed changes'. Both views display the document 'Adding a Media Resource'. The 'Proposed changes' view highlights a new 'Metadata' section with the following 'Keywords':

- (media resource)
- (Author mode)
- (Insert Media Resource)
- (Ubuntu 17.10)
- (HTML5 element)

The document content in both views is as follows:

Adding a Media Resource

To insert a media resource in a document, use the following procedure:

1. Place the cursor at the location where you want the media resource.
2. Select the Insert Media Resource action from the toolbar. A **Chose Media** dialog box appears.
Note: You can also drag media files from your system explorer or the **Project Explorer** view and drop them into your documents (or copy and paste them).
3. Select the URL for the media resource and click **Ok**.

Result in Author Mode: A reference to the specified media object is inserted and rendered in **Author** mode so that it can be played directly from there.

Attention:

- On Ubuntu 17.10, if you receive an error when trying to play videos in **Author** mode, you need to install the **libavformat57** library.

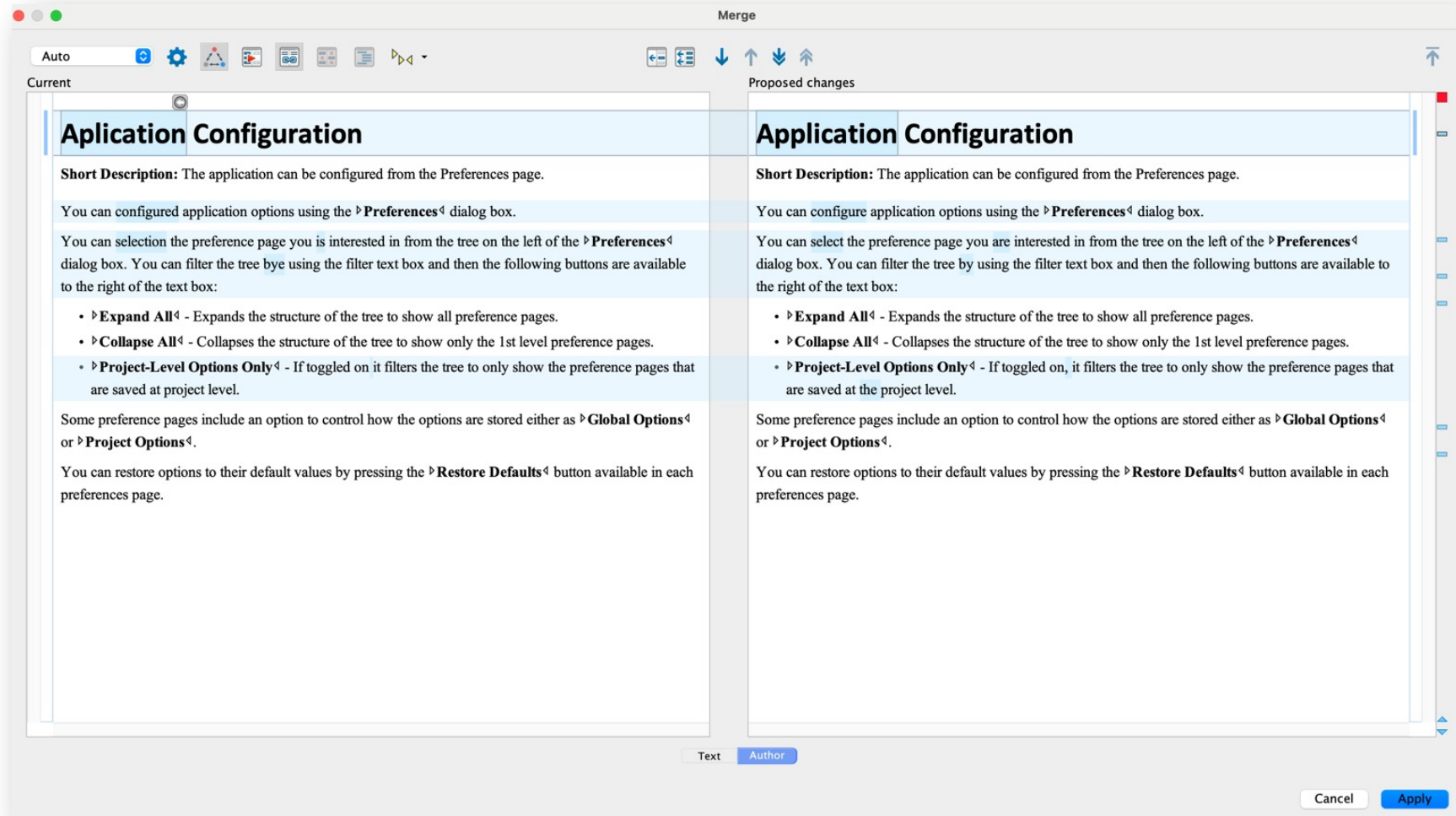
Result in Output: In the publishing stage, the media object is converted to an HTML5 element so that it can be rendered properly and played in all HTML5-based outputs.

At the bottom of the editor, there are tabs for 'Text' and 'Author', and buttons for 'Cancel' and 'Apply'.

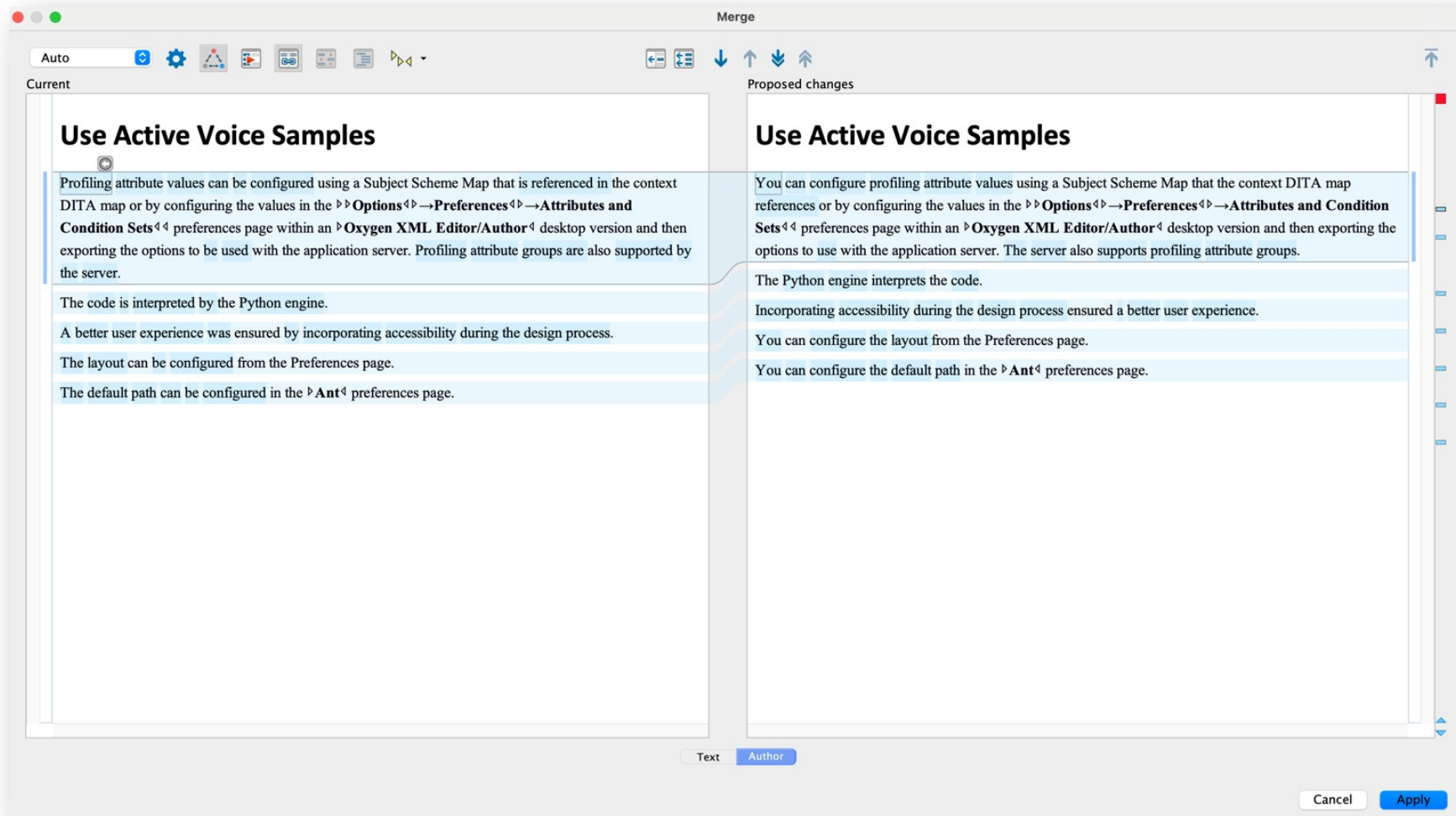
Rewrite actions

- Correct grammar
- Improve readability
- Use active voice
- Improve structure
- Itemize
- Join items

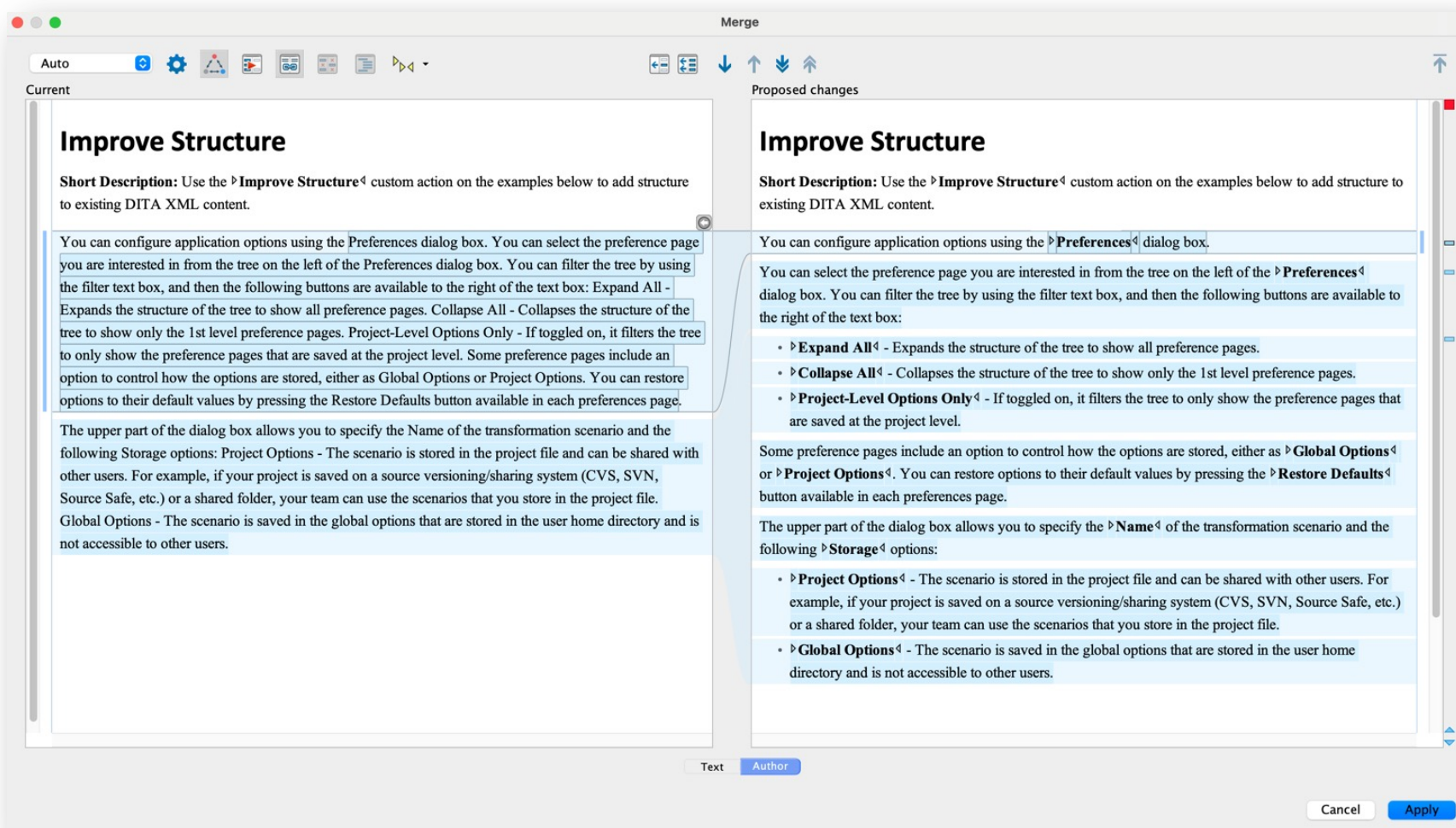
Correct grammar



Use active voice



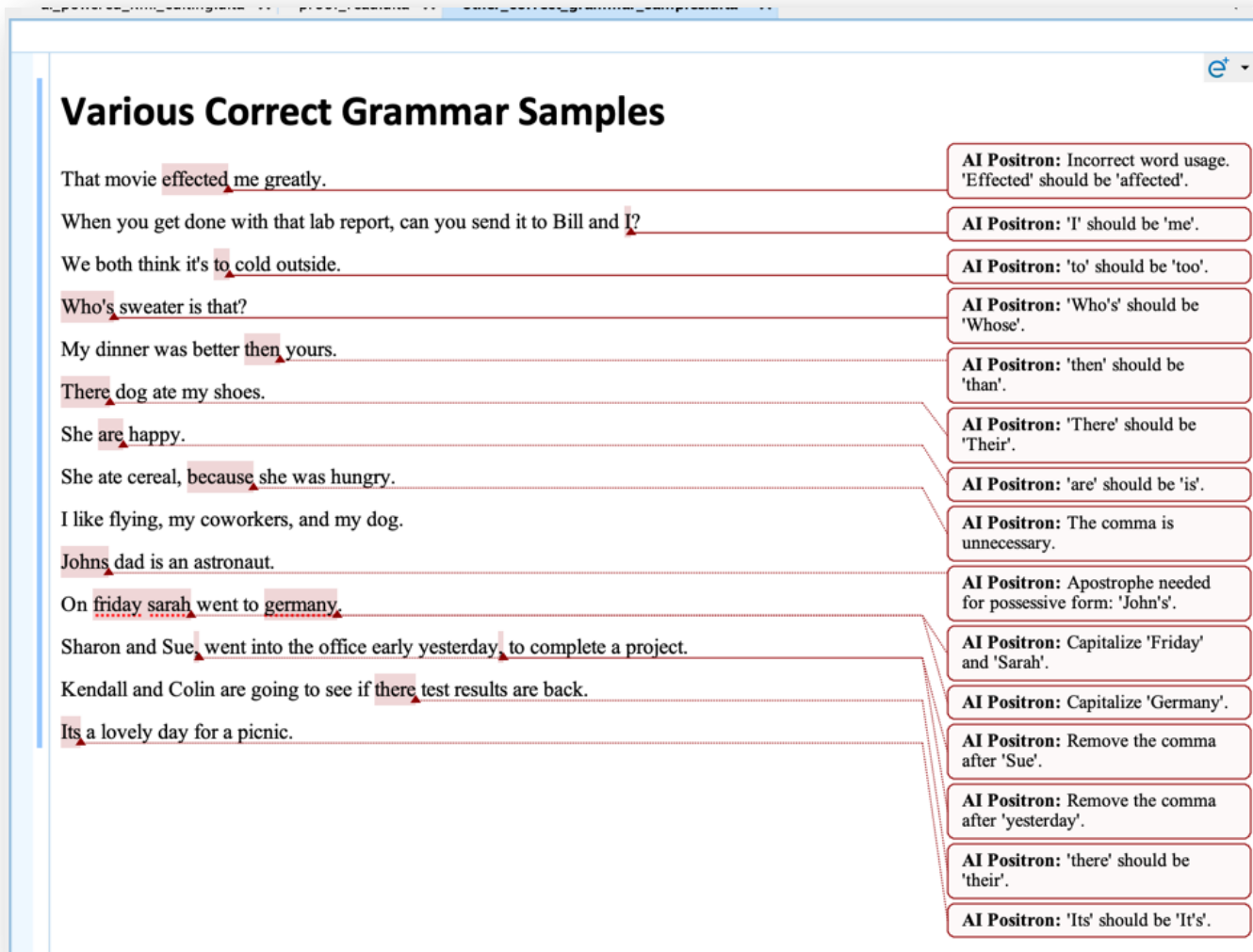
Improve structure



Review - AI integration via Oxygen comments

- Proofread
- Resolve comments

Proofread grammar issues



The screenshot shows a proofreading interface with a list of sentences on the left and corresponding AI Positron correction boxes on the right. Red lines connect the error locations in the text to the correction boxes.

Various Correct Grammar Samples

That movie **effected** me greatly. **AI Positron:** Incorrect word usage. 'Effected' should be 'affected'.

When you get done with that lab report, can you send it to Bill and **I**? **AI Positron:** 'I' should be 'me'.

We both think it's **to** cold outside. **AI Positron:** 'to' should be 'too'.

Who's sweater is that? **AI Positron:** 'Who's' should be 'Whose'.

My dinner was better **then** yours. **AI Positron:** 'then' should be 'than'.

There dog ate my shoes. **AI Positron:** 'There' should be 'Their'.

She **are** happy. **AI Positron:** 'are' should be 'is'.

She ate cereal, **because** she was hungry. **AI Positron:** The comma is unnecessary.

I like flying, my coworkers, and my dog. **AI Positron:** Apostrophe needed for possessive form: 'John's'.

Johns dad is an astronaut. **AI Positron:** Capitalize 'Friday' and 'Sarah'.

On **friday sarah** went to **germany**. **AI Positron:** Capitalize 'Germany'.

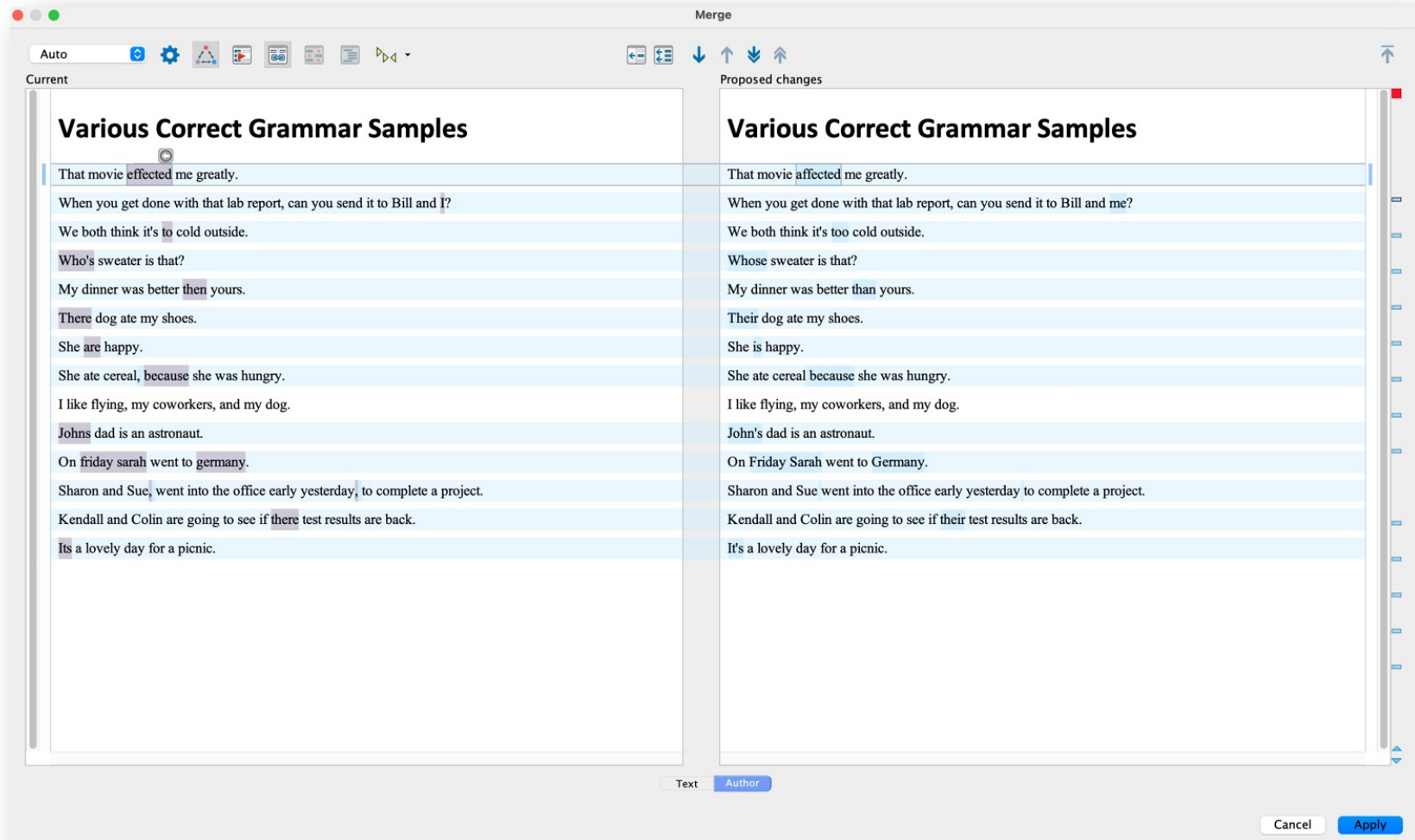
Sharon and Sue, went into the office early yesterday, to complete a project. **AI Positron:** Remove the comma after 'Sue'.

Kendall and Colin are going to see if **there** test results are back. **AI Positron:** Remove the comma after 'yesterday'.

Its a lovely day for a picnic. **AI Positron:** 'there' should be 'their'.

AI Positron: 'Its' should be 'It's'.

Resolve comments for grammar issues



Proofread styling/logical mistakes

Styling/Logic Mistakes

Short Description: Small logical fallacy or styling mistakes.

Assemble small 90° adapter fitting to outlet port of filter base and orient so that free end of fitting will point toward backhoe and angled about 30° upward from horizontal.

The ultimate guide for summertime fun: grilling kids and family.

Oxygen is a cross-platform application which runs only on Windows designed to accommodate all of your XML editing, authoring, developing, and publishing needs.

Please follow the steps below:

- Install the application.
- Uninstall the application.

Soccer fans the globe rejoiced when the striker scored the second goal.

The information that families have access to is what financial aid is available and thinking about the classes available, and how to register.

AI Positron: Styling mistake, 'grilling kids and family' implies cooking them. It should be 'grilling with kids and family'.

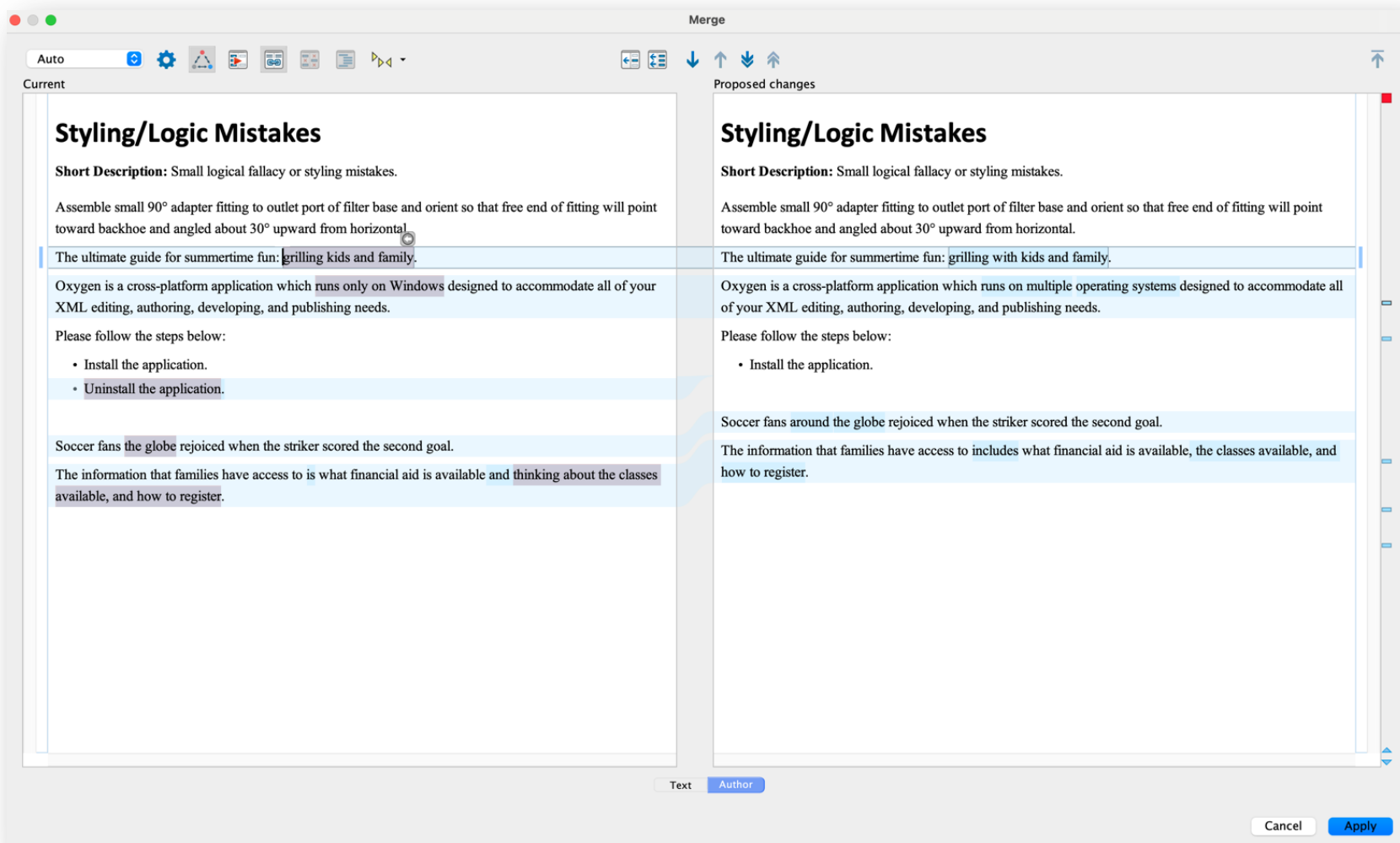
AI Positron: Logical inconsistency, 'cross-platform' means it should run on multiple operating systems, not just Windows.

AI Positron: Logical inconsistency, uninstalling the application immediately after installing it does not make sense.

AI Positron: Grammar mistake, missing 'around' or 'across' before 'the globe'.

AI Positron: Readability issue, the sentence is convoluted and unclear. Consider rephrasing for clarity.

Resolve comments for styling/logical mistakes



Overview actions

- Answer questions
- Generate questions
- Summarize
- Readability report

Generate and answer questions

- What are the main questions your topic responds to
- What answers an AI-based bot will provide to questions if this topic will be added to its context (in a Retrieval-Augmented Generation scenario)

Translation actions

- English
- French
- German
- Japanese
- Other languages...

Translation from English to French

The screenshot shows the Oxygen XML Editor's Merge dialog. The 'Current' pane on the left displays the English text: 'Java Programming' followed by a paragraph about Java programming, a paragraph about writing Java code, and a code block for a 'HelloWorld' class. The 'Proposed changes' pane on the right shows the French translation: 'Programmation Java' followed by the translated paragraphs and the same code block. The 'Author' tab is selected at the bottom, and 'Apply' and 'Cancel' buttons are visible.

Current

Java Programming

Java programming is a popular language used for developing various applications. It is an object-oriented language that is platform-independent, meaning it can run on any operating system.

When writing Java code, it is important to use the correct syntax and follow best practices. Here are some elements commonly used in DITA about programming:

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello, World!");  
    }  
}
```

The **codeph** element is used to highlight specific code within a paragraph, like this:
`System.out.println("Hello, World!");`

The **filepath** element is used to indicate a file path, like this: `C:\Users\username\Documents\file.txt`

Proposed changes

Programmation Java

La programmation Java est un langage populaire utilisé pour développer diverses applications. C'est un langage orienté objet qui est indépendant de la plateforme, ce qui signifie qu'il peut s'exécuter sur n'importe quel système d'exploitation.

Lors de l'écriture de code Java, il est important d'utiliser la syntaxe correcte et de suivre les meilleures pratiques. Voici quelques éléments couramment utilisés en DITA concernant la programmation :

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello, World!");  
    }  
}
```

L'élément **codeph** est utilisé pour mettre en évidence un code spécifique dans un paragraphe, comme ceci :
`System.out.println("Hello, World!");`

L'élément **filepath** est utilisé pour indiquer un chemin d'accès de fichier, comme ceci :
`C:\Users\username\Documents\file.txt`

Text Author

Cancel Apply

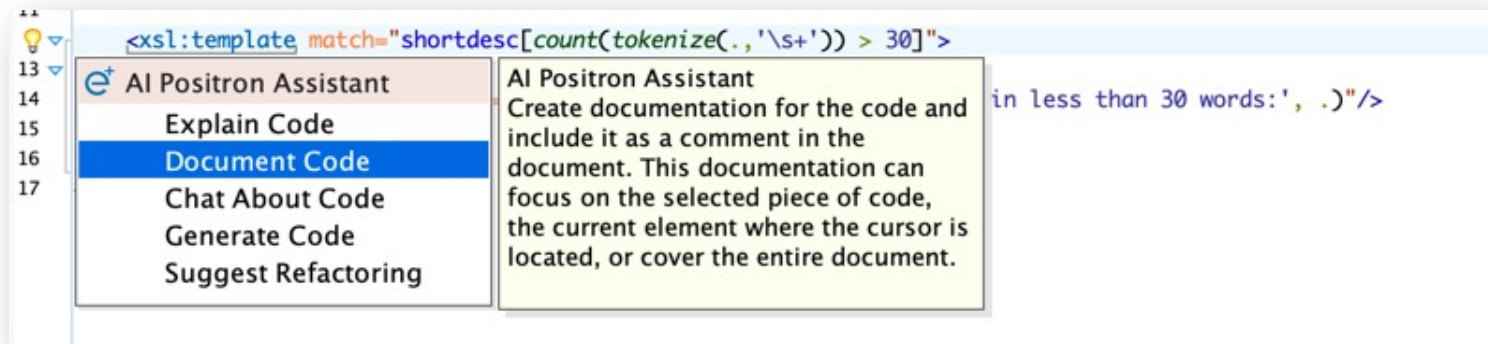
Marketing actions

- Release notes
- Marketing post
- Improve SEO
- Pain-Agitate-Solution
- Features-Advantages-Benefits

Development actions

- Explain code
- Document code
- Suggest Refactoring
- Chat about code
- Generate code

Document code



The screenshot shows the Oxygen XML Editor interface. A code snippet is selected: `<xsl:template match="shortdesc[count(tokenize(.,'\s+')) > 30]">`. The AI Positron Assistant context menu is open, listing several actions: Explain Code, Document Code (highlighted), Chat About Code, Generate Code, and Suggest Refactoring. A tooltip for the 'Document Code' action is visible, stating: 'AI Positron Assistant Create documentation for the code and include it as a comment in the document. This documentation can focus on the selected piece of code, the current element where the cursor is located, or cover the entire document.'

```
<!-- Rephrases the content of "shortdesc" elements exceeding 30 words.
      Uses an AI transformation to shorten the content to less than 30 words. -->
<xsl:template match="shortdesc[count(tokenize(.,'\s+')) > 30]">
  <shortdesc>
    <xsl:value-of select="ai:transform-content('Rephrase this in less than 30 words:', .)"/>
  </shortdesc>
</xsl:template>
```

Generate code

```
sch:schema
1 <?xml version="1.0" encoding="UTF-8"?>
2 <sch:schema xmlns:sch="http://purl.oclc.org/dsdl/schematron" queryBinding="xslt2"
3   xmlns:sqf="http://www.schematron-quickfix.com/validator/process">
4
5   <sch:pattern id="test">
6     <sch:rule context="shortdesc">
7       <!-- Generate an assert that verifies the number of words to be at most 10. Use sch prefix -->
8       <sch:assert test="count(tokenize(., '\s+')) &lt;= 10">The number of words must be at most 10.</sch:assert>
9
10
11
12
13
14     </sch:rule>
15   </sch:pattern>
16
17 </sch:schema>
```

Define AI actions (or prompts) by examples

Automatically record the changes to a document and use them as few shots samples to define AI actions

- Describe the changes you want to make
- Make the changes to a document
- Save as custom action or favorite prompt

Other integration points

Ai Fixes

AI Refactoring

XPath AI-based functions

AI Fixes

- Automatically propose solutions to error messages by the AI model
- On any error we can ask the AI model to provide a fix
- Schematron error messages are best candidates, because the error message is written by the schema author for the user

AI Positron Fix

The screenshot displays the Oxygen XML Editor interface with the AI Positron Assistant Enterprise. The main editor window shows XML content with a list of links and a paragraph of text. The AI Positron Assistant Enterprise sidebar on the left provides instructions and a code snippet for an external link. The bottom panel shows a list of error messages, with one selected and a context menu open. A secondary window in the foreground shows the same XML content with a different error message highlighted.

AI Positron Assistant Enterprise

Me
AI Fix
Fix the problem using AI.

AI Positron (GPT-4o)
<xref href="http://www.wikipedia.org/" format="html" scope="external"/>

Send a message to the AI platform.

AI may provide inaccurate information.

Project DITA.. Ope.. AI Po.. Git S..

flowers.xml

topic body section p xref

Read more about growing flowers here:

- ▶ [Flower garden](#);
- ▶ [Raised-bed gardening](#);
- ▶ [Compost](#)

Most of the information was taken from [www.wikipedia.org](#), the free encyclopedia.

Care and Preparation

When caring for your flower garden you want to feed your plants properly, control pests and weeds. Good soil is a must to successful gardening, landscaping, and healthy flowers. You have to balance the soil structure with nutrients and regulate the pH to cover your plants' needs. And above all.

An external link should start with http(s). file:/Users/george/demo/octavian-demos/

Text Grid Author

Results

Info | Description - 11 items

- flowers.xml, schema "flowers.sch", scenario "DITA", document type "DITA" (8 items)
 - W [ISO Schematron] Bold element is not allowed in title.
 - E [ISO Schematron] Referenced resource "http://en.wikipedia.org/wiki/Compost" needs to have the "format" attribute set to "html".
 - W [ISO Schematron] An external link should start with http(s). file:/Users/george/demo/octavian-demos/
 - E [ISO Schematron] Cells are missing. (The number of cells for each row must be 3)
 - [ISO Schematron] It is not recommended to add a semicolon after a list item.
 - [ISO Schematron] It is not recommended to add a semicolon after a list item.
 - E [ISO Schematron] Ordered lists are not allowed, use unordered lists instead.
 - W [ISO Schematron] A list must have more than one item
- flowers.xml, scenario "DITA", document type "DITA" (3 items)
 - W [REF] Reference with external scope to non-DITA resource does not have the "format" attribute set to "html".
 - W [REF] Reference to external resource "http://en.wikipedia.org/wiki/Compost" needs to have the "format" attribute set to "html".
 - E [Table Layout] The number of cells in the row (2) is less than the value of the table attribute "cols" (3).

AI Positron Fix

Show message
Previous message
Next message
Copy
Copy description
Select all
Remove selected
Remove all

flowers.xml*

topic body section p xref

Read more about growing flowers here:

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- ▶ [Raised-bed gardening](#);
- ▶ [Compost](#)

Most of the information was taken from [http://www.wikipedia.org](#), the free encyclopedia.

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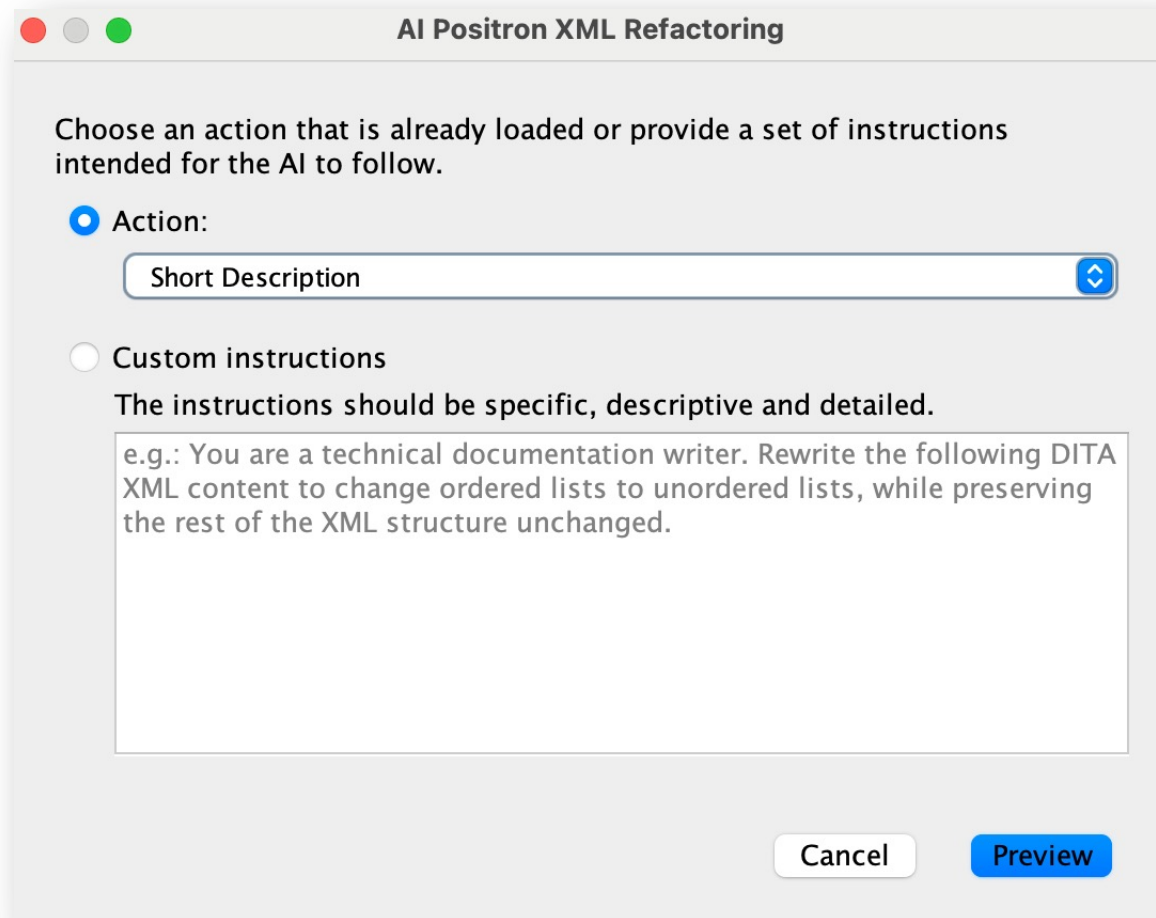
Referenced resource "http://en.wikipedia.org/wiki/Compost" needs to have the "format" attribute set to "html".

Text Grid Author

AI Refactoring


- Apply any AI action on a set of documents
- Preview proposed changes and be able to exclude the ones you do not want

Trigger AI Refactoring

A dialog box titled "AI Positron XML Refactoring" with a standard macOS-style title bar (red, yellow, green buttons). The dialog contains a text area with instructions, two radio buttons for "Action:" and "Custom instructions", a dropdown menu for "Short Description", and a text area for "Custom instructions" with an example. At the bottom are "Cancel" and "Preview" buttons.

Choose an action that is already loaded or provide a set of instructions intended for the AI to follow.

Action:

Short Description 

Custom instructions

The instructions should be specific, descriptive and detailed.

e.g.: You are a technical documentation writer. Rewrite the following DITA XML content to change ordered lists to unordered lists, while preserving the rest of the XML structure unchanged.

Cancel Preview

Preview AI Refactoring

The screenshot shows the 'Preview' dialog in Oxygen XML Editor. At the top, it lists 'Changes to be performed' with a list of files, including `/Users/.../nitrogen-xml-editor-ug-main/topics/vpat_accessibility_conformance_report.dita`, which is highlighted. Below the list are buttons for 'Select all', 'Deselect all', 'Next Change', and 'Previous Change'. The main area is split into two panes. The left pane shows the original XML code with line numbers 1-10. The right pane shows the refactored XML code with line numbers 2-12. A blue callout box highlights the difference in the `<shortdesc>` element between the two versions. At the bottom right, there are 'Cancel' and 'Update' buttons.

Changes to be performed

- /Users/.../nitrogen-xml-editor-ug-main/topics/application_configuration.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/vpat_accessibility_conformance_report.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/getting-started.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/introduction.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/installation.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/common_shortcut_keys.dita
- /Users/.../nitrogen-xml-editor-ug-main/topics/configure_application_layout.dita

Select all Deselect all Next Change Previous Change

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE topic PUBLIC "-//OASIS//DTD DITA
3 Topic//EN" "topic.dtd">
4 <topic id="vpat_accessibility_conformance_report">
5   <title>VPAT Accessibility Conformance Report</title>
6   <body>
7     <p id="p_eqq_1qf_x5b">A Voluntary Product
8     Accessibility Template (VPAT) is a document that
9     explains how information and communication
10    technology (ICT) products such as software,
11    hardware, electronic content, and support
12    documentation meet (conform to) the <xref
13    href="https://www.access-board.gov/guidelines-and-st
14    andards/communications-and-it/about-the-ict-refresh
15    /final-rule"
16    format="html" scope="external">Revised 508
```

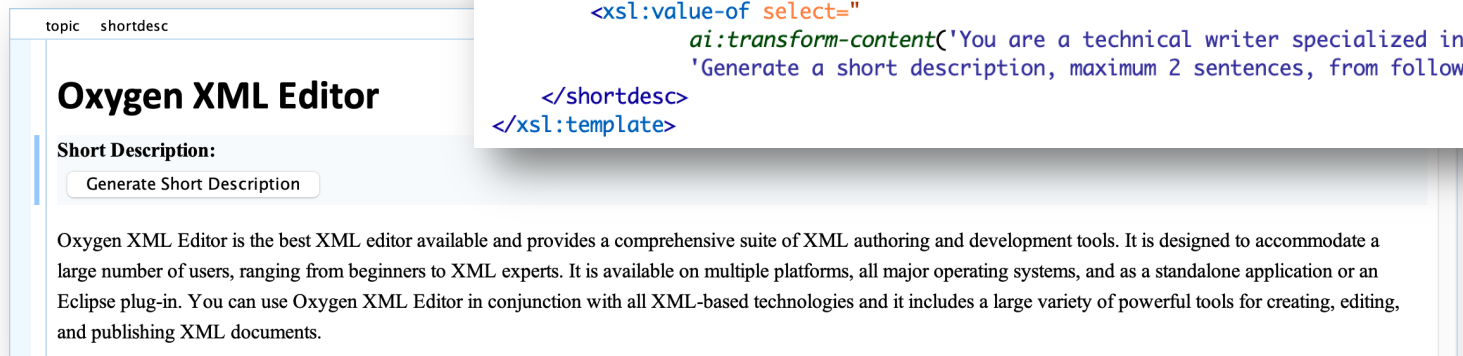
```
2 <topic id="vpat_accessibility_conformance_report">
3   <title>VPAT Accessibility Conformance Report</title>
4   <shortdesc>A Voluntary Product Accessibility
5   Template (VPAT) outlines how ICT products meet
6   Revised 508 Standards for IT accessibility, assisting
7   federal contractors and buyers. The
8   document provides compliance details for
9   international standards and includes conformance
10  levels for various accessibility
11  guidelines.</shortdesc>
12  <body>
13    <p id="p_eqq_1qf_x5b">A Voluntary Product
14    Accessibility Template (VPAT) is a document that
15    explains how information and communication
16    technology (ICT) products such as software,
17    hardware, electronic content, and support
```

Cancel Update

XPath AI-based functions

- Interact with AI models from any language that uses XPath, such as
 - XSLT
 - XQuery
 - XQuery Update
 - Schematron
 - Schematron Quick Fix
- Enables interesting use cases, such as:
 - Use AI from custom actions that can be triggered by users in visual editing mode - these custom actions can be defined in many ways, including by triggering XSLT or XQuery scripts
 - Use AI from custom XML refactoring actions, the refactoring actions are based on XSLT or XQuery Update scripts
 - Use AI in Schematron to check various conditions - Schematron uses XPath for tests
 - Use AI in quick fixes defined by Schematron Quick Fix, this also uses XPath as its expression language

AI-based custom Author actions



topic shortdesc

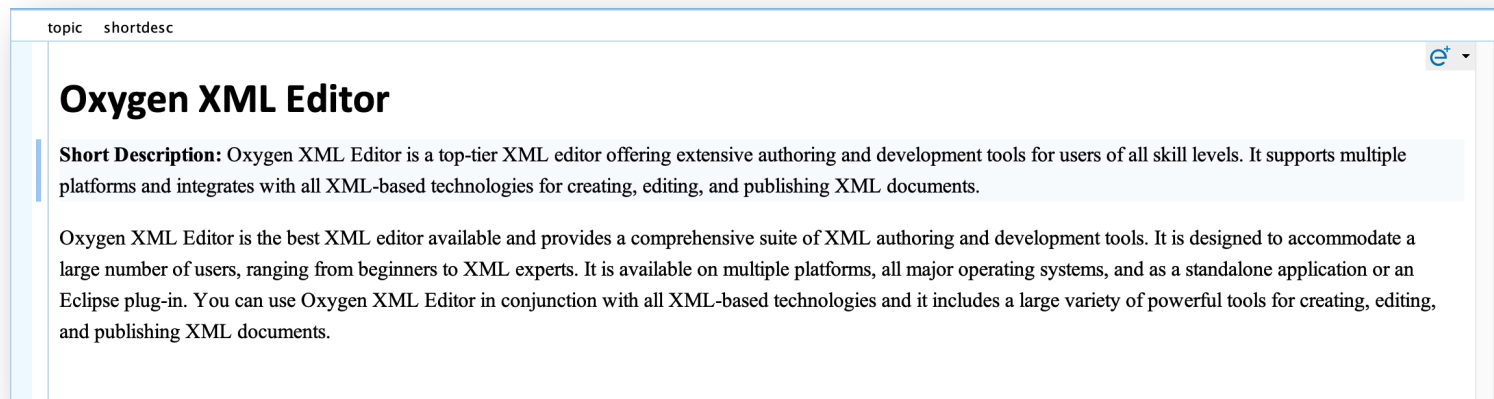
Oxygen XML Editor

Short Description:

Generate Short Description

Oxygen XML Editor is the best XML editor available and provides a comprehensive suite of XML authoring and development tools. It is designed to accommodate a large number of users, ranging from beginners to XML experts. It is available on multiple platforms, all major operating systems, and as a standalone application or an Eclipse plug-in. You can use Oxygen XML Editor in conjunction with all XML-based technologies and it includes a large variety of powerful tools for creating, editing, and publishing XML documents.

```
<xsl:template match="/*">
  <shortdesc>
    <xsl:value-of select="
      ai:transform-content('You are a technical writer specialized in writing short descriptions. ',
        'Generate a short description, maximum 2 sentences, from following text: ' || body)"/>
    </shortdesc>
  </xsl:template>
```



topic shortdesc

Oxygen XML Editor

Short Description: Oxygen XML Editor is a top-tier XML editor offering extensive authoring and development tools for users of all skill levels. It supports multiple platforms and integrates with all XML-based technologies for creating, editing, and publishing XML documents.

Oxygen XML Editor is the best XML editor available and provides a comprehensive suite of XML authoring and development tools. It is designed to accommodate a large number of users, ranging from beginners to XML experts. It is available on multiple platforms, all major operating systems, and as a standalone application or an Eclipse plug-in. You can use Oxygen XML Editor in conjunction with all XML-based technologies and it includes a large variety of powerful tools for creating, editing, and publishing XML documents.

Schematron Quick Fix with AI

topic shortdesc

About DITA

Short Description: The Darwin Information Typing Architecture (DITA) is an XML-based architecture for authoring, producing, and delivering technical information. It divides content into self-contained topics that you can reuse in various deliverables. The extensibility of DITA permits organizations to define specific information structures while still Shorten description h them. DITA content is created as topics, each an individual XML file. Typically, each topic has a defined primary objective and structure, and DITA also includes several specialized topic types (task, concept, reference, glossary entry).

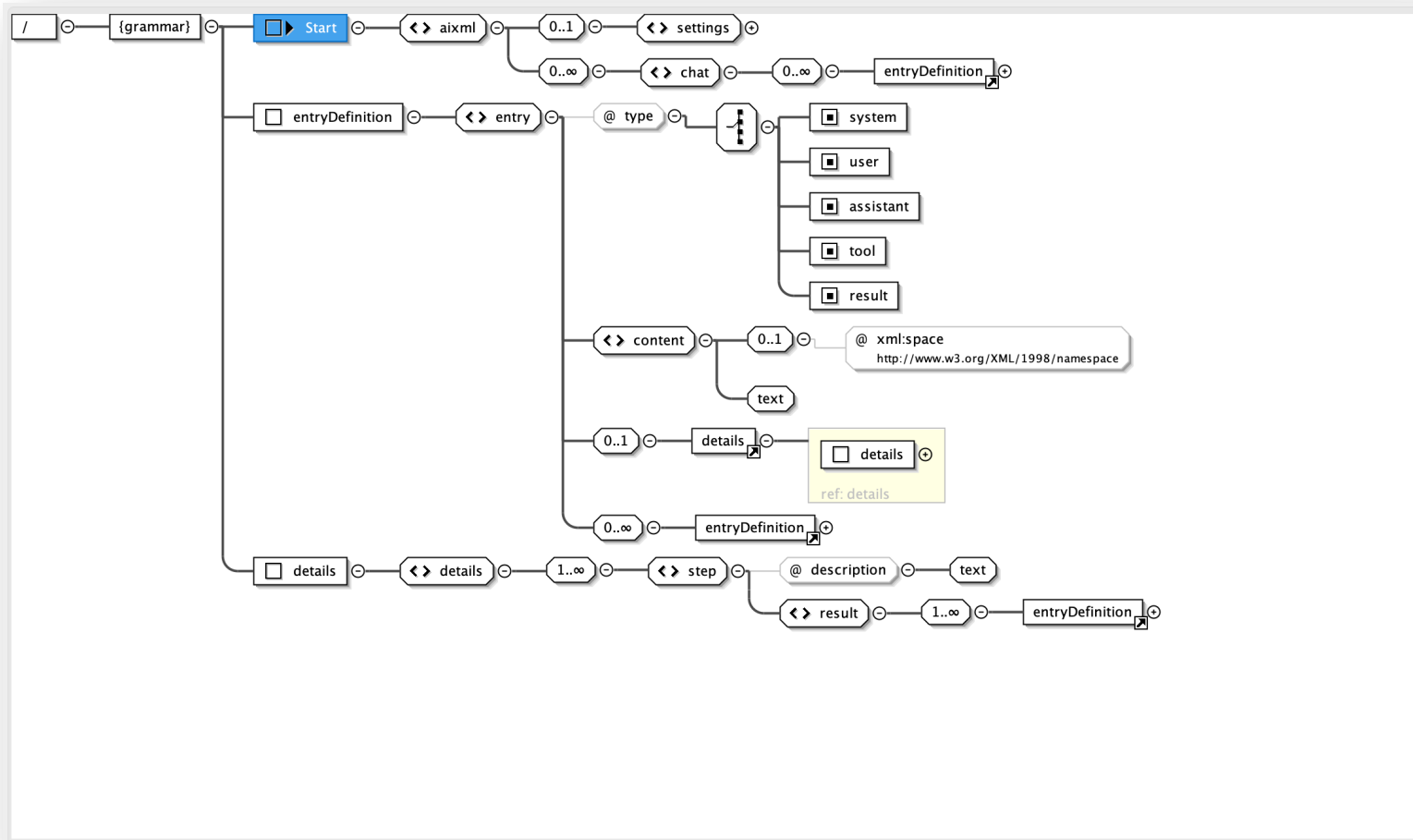
```
<sch:pattern>
  <sch:rule context="shortdesc">
    <sch:report test="count(tokenize(., '\s+')) > 55" role="warn" sqf:fix="rephrase">The
      short description must be concise. </sch:report>
    <sqf:fix id="rephrase">
      <sqf:description>
        <sqf:title>Shorten description</sqf:title>
      </sqf:description>
      <sqf:replace match="text()"
        select="ai:transform-content('Rephrase the following text in a single phrase strictly less than 40 words.', .)"
      />
    </sqf:fix>
  </sch:rule>
</sch:pattern>
```

topic shortdesc

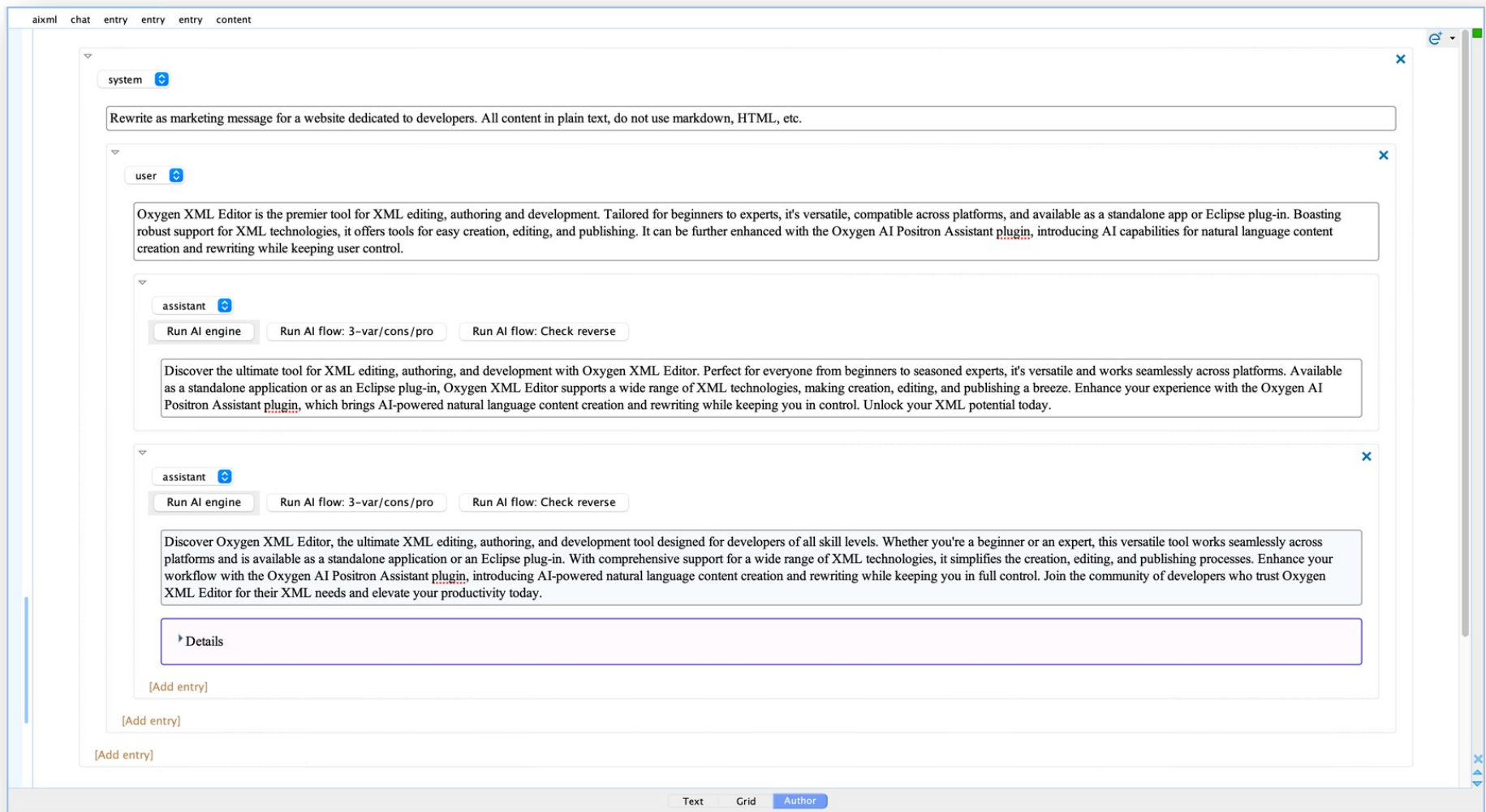
About DITA

Short Description: The Darwin Information Typing Architecture (DITA) is an XML-based framework for creating, managing, and delivering reusable technical information through self-contained topics with extensibility for custom information structures.

Implement a chat framework – AIXML language



Implement a chat framework



The screenshot displays the Oxygen XML Editor chat interface. At the top, a breadcrumb trail reads "aixml chat entry entry entry content". The chat area contains three messages:

- system**: "Rewrite as marketing message for a website dedicated to developers. All content in plain text, do not use markdown, HTML, etc."
- user**: "Oxygen XML Editor is the premier tool for XML editing, authoring and development. Tailored for beginners to experts, it's versatile, compatible across platforms, and available as a standalone app or Eclipse plug-in. Boasting robust support for XML technologies, it offers tools for easy creation, editing, and publishing. It can be further enhanced with the Oxygen AI Positron Assistant plugin, introducing AI capabilities for natural language content creation and rewriting while keeping user control."
- assistant**: This message includes three buttons: "Run AI engine", "Run AI flow: 3-var/cons/pro", and "Run AI flow: Check reverse". The main text reads: "Discover the ultimate tool for XML editing, authoring, and development with Oxygen XML Editor. Perfect for everyone from beginners to seasoned experts, it's versatile and works seamlessly across platforms. Available as a standalone application or as an Eclipse plug-in, Oxygen XML Editor supports a wide range of XML technologies, making creation, editing, and publishing a breeze. Enhance your experience with the Oxygen AI Positron Assistant plugin, which brings AI-powered natural language content creation and rewriting while keeping you in control. Unlock your XML potential today."

Below the assistant's message is another **assistant** message with the same buttons and text, but with a "Details" link and a "[Add entry]" placeholder below it. The interface also features a "[Add entry]" placeholder at the bottom left and a mode selector at the bottom right with options for "Text", "Grid", and "Author".

Conversation workflow

- Generate alternative responses
- Determine cons/pros for each
- Select the best response from the 3 variants based on pros and cons
- Explain how the best response was obtained

Implementation

- with the chat framework using multiple interactions with the AI model
- using structured output support

Workflow using multiple interactions

Details

Generated 3 variantsassistant 

Oxygen XML Editor is the ultimate tool for XML editing, authoring, and development. Designed for both beginners and experts, it's versatile and works seamlessly across all platforms. Available as a standalone app or an Eclipse plug-in, it provides robust support for all XML technologies. With tools for easy creation, editing, and publishing, it's the all-in-one solution for your XML needs. Enhance it further with the Oxygen AI Positron Assistant [plugin](#), bringing AI capabilities for natural language content creation and rewriting, all while keeping you in control.

assistant 

Discover Oxygen XML Editor, the ultimate solution for XML editing, authoring, and development. Perfect for both beginners and experts, this versatile tool works seamlessly across platforms and is available as a standalone application or an Eclipse plug-in. With comprehensive support for a wide range of XML technologies, it simplifies the creation, editing, and publishing process. Enhance your workflow even further with the Oxygen AI Positron Assistant [plugin](#), bringing AI-powered natural language content creation and rewriting, all while keeping you in control.

assistant 

Discover the ultimate solution for XML editing with Oxygen XML Editor, the go-to tool for developers at all skill levels. Whether you're a novice or a seasoned expert, Oxygen XML Editor provides a versatile, cross-platform experience available both as a standalone application and an Eclipse plug-in. With comprehensive support for all XML technologies, it simplifies the creation, editing, and publishing processes. Elevate your productivity with the Oxygen AI Positron Assistant [plugin](#), which brings AI-powered natural language content creation and rewriting while ensuring you stay in full control. Join the community of developers who trust Oxygen XML Editor for their XML needs.

Determined pros and cons of each variant

assistant

Here there are 3 variants, each with pros and cons:

Variant 1:

Oxygen XML Editor is the ultimate tool for XML editing, authoring, and development. Designed for both beginners and experts, it's versatile and works seamlessly across all platforms. Available as a standalone app or an Eclipse plug-in, it provides robust support for all XML technologies. With tools for easy creation, editing, and publishing, it's the all-in-one solution for your XML needs. Enhance it further with the Oxygen AI Positron Assistant [plugin](#), bringing AI capabilities for natural language content creation and rewriting, all while keeping you in control.

Pros:

1. The message is concise and clear, making it easy for developers to understand the key features and benefits of Oxygen XML Editor.
2. Highlights versatility and platform compatibility, appealing to a broad audience of developers.
3. Emphasizes both beginners and experts, showing the tool's wide range of usability.
4. Mentions the availability of a standalone app and Eclipse plug-in, providing options for different user preferences.
5. Points out the robust support for XML technologies, which is crucial for developers working with XML.
6. Introduces the Oxygen AI Positron Assistant [plugin](#), showcasing advanced AI capabilities for content creation and rewriting.

Cons:

1. Lacks specific examples of how the tool can be used in real-world scenarios, which could make it less [relatable](#).
2. Does not mention any unique selling points or features that differentiate it from competitors.
3. The description of the AI capabilities is brief and may not fully convey the potential benefits.
4. It does not address pricing or availability details, which might be important for potential users.
5. The message is focused on features but does not explicitly mention any user testimonials or success stories.
6. It does not address any potential limitations or learning curves associated with the tool.

Variant 2:

Discover Oxygen XML Editor, the ultimate solution for XML editing, authoring, and development. Perfect for both beginners and experts, this versatile tool works seamlessly across platforms and is available as a standalone application or an Eclipse plug-in. With comprehensive support for a wide range of XML technologies, it simplifies the creation, editing, and publishing process. Enhance your workflow even further with the Oxygen AI Positron Assistant [plugin](#), bringing AI-powered natural language content creation and rewriting, all while keeping you in control.

Pros:

1. Clear and concise messaging that effectively communicates the versatility and usability of Oxygen XML Editor.
2. Emphasizes the tool's compatibility across platforms and availability in different forms (standalone and Eclipse plug-in).
3. Highlights the comprehensive support for XML technologies, appealing to a wide range of users.
4. Introduces the Oxygen AI Positron Assistant [plugin](#), showcasing its AI capabilities for enhancing productivity.

Cons:

1. Lacks specific examples of XML technologies supported, which might be useful for some users.
2. Does not mention the specific benefits for different user levels (beginners vs. experts) beyond general suitability.
3. The message could be more engaging with a stronger call to action.
4. It does not detail the nature of user control offered by the AI [plugin](#), which could be an important point for potential users.

Analized the variants and pros and cons and generated the final result

assistant

Discover Oxygen XML Editor, the ultimate XML editing, authoring, and development tool designed for developers of all skill levels. Whether you're a beginner or an expert, this versatile tool works seamlessly across platforms and is available as a standalone application or an Eclipse plug-in. With comprehensive support for a wide range of XML technologies, it simplifies the creation, editing, and publishing processes. Enhance your workflow with the Oxygen AI Positron Assistant [plugin](#), introducing AI-powered natural language content creation and rewriting while keeping you in full control. Join the community of developers who trust Oxygen XML Editor for their XML needs and elevate your productivity today.

Explain how you reached the final result

assistant

I reached the final result by combining the strengths of the different variants provided while addressing their respective weaknesses. Here's how I formulated the final message:

1. **Clarity and Conciseness**: From all variants, I ensured the message remains clear and concise, effectively communicating the core benefits and features of Oxygen XML Editor.
2. **Target Audience**: Emphasized suitability for both beginners and experts, appealing to a broad range of developers. This aspect was consistent across all variants.
3. **Versatility and Compatibility**: Highlighted the tool's versatility and cross-platform compatibility, as well as its availability as both a standalone application and an Eclipse plug-in. This was a key point in all variants.
4. **Comprehensive Support**: Included the mention of comprehensive support for a wide range of XML technologies, simplifying creation, editing, and publishing processes. This point was strong across all variants and crucial for developer interest.
5. **AI Integration**: Introduced the Oxygen AI Positron Assistant [plugin](#), emphasizing its AI-powered capabilities for natural language content creation and rewriting, while maintaining user control. This was a notable feature in all variants.
6. **Community and Trust**: Added a call to action by inviting developers to join the community that trusts Oxygen XML Editor, making the message more engaging and inclusive.

By synthesizing these elements, the final message effectively communicates the tool's value proposition, versatility, and advanced features while being engaging and inclusive.

Workflow using structured output


```
1 {
2   "name": "best_response_from_multiple_variants",
3   "description": "Find the best response by generating three variants with pros and cons, and then analyze them to get the final answer.",
4   "strict": true,
5   "schema": {
6     "type": "object",
7     "properties": {
8       "threeVariantsWithProsAndCons": {
9         "type": "object",
10        "description": "the three variants with pros and cons",
11        "properties": {
12          "variantOne": {
13            "type": "object",
14            "description": "the first variant with pros and cons",
15            "properties": {
16              "content": {
17                "type": "string",
18                "description": "the first variant"
19              }, /content
20              "prosAndCons": {
21                "type": "string"
22              } /prosAndCons
23            }, /properties
24            "required": [
25              "content",
26              "prosAndCons"
27            ], /required
28            "additionalProperties": false
29          }, /variantOne
30          "variantTwo": { [17 lines]
31          "variantThree": { [17 lines]
32        }, /properties
33        "required": [
34          "variantOne",
35          "variantTwo",
36          "variantThree"
37        ], /required
38        "additionalProperties": false
39      }, /threeVariantsWithProsAndCons
40      "final_answer": {
41        "type": "string",
42        "description": "the final answer determined by combining the generated variants and taking into account the pros and cons to generate the best response"
43      }, /final_answer
44      "explanation": {
45        "type": "string",
46        "description": "describe how you obtained the final answer, explaining with references to each variant you picked the corresponding fragment from"
47      } /explanation
48    }, /properties
49    "required": [
50      "threeVariantsWithProsAndCons",
51      "final_answer",
52      "explanation"
53    ], /required
54    "additionalProperties": false
55  } /schema
56 }
```

JSON threeVariantsWithProsAndCons variantTwo content

```
{
  threeVariantsWithProsAndCons:
    variantOne:
      content: Welcome to the ultimate hub for developers: a platform that brings precision to your projects. Explore the unmatched efficiency of Oxygen XML Editor, a top-tier tool that caters to both novices and seasoned experts. Whether you're diving into XML for the first time or refining complex projects, our platform provides the versatility and compatibility across systems you need - as a standalone app or seamlessly integrated with Eclipse. Discover our comprehensive support for XML technologies that enhance creation, editing, and publishing processes. Plus, elevate your tasks with the innovative Oxygen AI Positron Assistant plugin. Transform your workflow with AI-powered natural language content creation and rewriting, all while maintaining complete control. Unleash your potential with a tool that evolves your coding experience.
      prosAndCons: Pros: Highlights detailed features of the Oxygen XML Editor, showing its versatility and suitability for both beginners and experts. It also emphasizes the additional value of the AI Positron Assistant plugin. Cons: Might be too focused on the product features without addressing specific developer needs or how it integrates into their daily workflows.
    variantTwo:
      content: Step into the world of advanced XML editing with our developer-centric website, offering you the premium experience of Oxygen XML Editor. Perfectly tailored to meet the needs of everyone from rookies to XML virtuosos, this tool stands out with cross-platform compatibility and the choice of a standalone application or an Eclipse plug-in. With strong support for XML technologies, effortlessly create, edit, and publish content. Amplify your workflow with the Oxygen AI Positron Assistant plugin, enhancing your projects with AI-driven content creation and rewriting, yet placing user control firmly in your hands. Experience smoother coding and creative solutions designed for developers who strive for the best.
      prosAndCons: Pros: Directly appeals to developers by emphasizing advanced features and developer-focused benefits. Cons: The appeal might be too technical for beginners who are still getting familiar with XML and its tools.
    variantThree:
      content: Discover a game-changing platform for developers where Oxygen XML Editor takes center stage. Designed with every developer in mind - from novices finding their feet to experts pushing boundaries - experience unmatched versatility that spans across platforms, available as a standalone or within Eclipse. Benefit from its robust support for XML technologies, ensuring smooth creation, editing, and publishing processes. Maximize efficiency with the cutting-edge Oxygen AI Positron Assistant plugin integrating AI effortlessly for task automation in natural language content creation and rewriting, without sacrificing control. Transform your development process with innovation that caters to your every need.
      prosAndCons: Pros: Highlights the integration of AI and the broad spectrum of developer-focused features. Cons: Might rely too heavily on the concept of the tool being 'game-changing' without concrete examples of its impact.
  final_answer: Welcome to the ultimate hub for developers: a platform that brings precision to your projects. Explore the unmatched efficiency of Oxygen XML Editor, a top-tier tool that caters to both novices and seasoned experts. Whether you're diving into XML for the first time or refining complex projects, our platform provides the versatility and compatibility across systems you need - as a standalone app or seamlessly integrated with Eclipse. Discover our comprehensive support for XML technologies that enhance creation, editing, and publishing processes. Plus, elevate your tasks with the innovative Oxygen AI Positron Assistant plugin. Transform your workflow with AI-powered natural language content creation and rewriting, all while maintaining complete control. Unleash your potential with a tool that evolves your coding experience.
  explanation: After analyzing all variants, the final answer was selected for its strong focus on the product features while maintaining appeal to both beginners and expert developers. It balances technical details with benefits, clearly establishing why developers would appreciate the Oxygen XML Editor, including the newer AI integration through the plugin. It provides a solution-oriented perspective without overwhelming technical jargon, making it accessible and enticing to a broad audience.
}
```

Oxygen Feedback

AI Assistant for published content

- AI response together with the search results
- RAG Chat on published content
- It is also a feedback tool for publishers
 - successful sessions reduce support costs
 - unsuccessful sessions are in fact an opportunity for improvement
 - the information is there but was not found - increase it relevance for that question
 - the information is not there, if it is relevant then it needs to be added - improve the documentation coverage

Future plans

- Enable AI to perform actions on the editor itself (via functions or by interpreting the result).
- Support complex workflows
 - via multiple interactions
 - via structured output support
- Suggest continuations for actions/chat sessions
- Chat memory - make chat history available via AI callback functions (via the RAG support)
- Support multiple engines to be used in the same time so we can implement workflows when we automatically compare results from various models.

Takeaways

- AI changed the tools in content creation and development
- All related conferences have an AI-dominant schedule
- Integrating AI into a product is a non-trivial
- Rapid and continuous development

Thank you!

Happy to answer your questions!

George Bina

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